

## Does Fake Snow Really Grow?

We all know that real snow is made of water – the frozen kind. While most of us love snow, the frozen stuff is hard to come by in warmer climates like Georgia. But, if we can't get the real snow, could we at least mess around with some fake stuff?

Well, the most popular type of fake snow is actually an interesting **mixture** of two **materials**. The first material is an **engineered** (man-made) polymer that has an incredible ability to absorb water. It is so good at absorbing water that they call it a **superabsorber**. All by itself, this material looks pretty boring like sugar or baby powder. But, if you add water, you can instantly observe how well it absorbs water. Really cool stuff for sure.



While it may be really cool, that doesn't mean it is useful or practical. If I'm a movie director filming a winter scene in Atlanta, need to know how well it substitutes for the real thing. Does it feel real? Does it act real? Does it look real? And, of course, does it melt?

I also need to know just how much fake snow to buy for my fake wonderland. They say that the stuff expands when you add water so that it makes lots more than you would expect. But it's kind of expensive and unless it expands to take up at least 4 times its original space, we won't be able to afford it.



So in this STEM Challenge, you have two tasks to tackle. First, you have to test and evaluate the quality of the fake snow and determine if it is good enough to use. Second, you have to determine how much the snow powder expands when it is mixed with water. If it doesn't make enough, it's not an option.